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10/529,690	03/29/2005	Robert Peter Scholl	DE 020220	1731

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EXAMINER

ROY, SIKHA

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2879

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

The Amendment, filed on October 18, 2007 has been entered and acknowledged by the Examiner.

Cancellation of claims 3 and 4 and addition of new claim 10 have been entered.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claims 7 and 10 are objected to because of the following informalities:

In claim 7, the recitation of 'the reduction in the size of the fused press-seal can be obtained as a function of the particular material of which coating is composed' does not specifically claim any structure of the lamp and hence is objected.

In claim 10, the recitation of 'the reduction in the size of the longitudinal extent of the part of the molybdenum that is not exposed can be obtained as a function of the particular material of which coating is composed' does not specifically claim any structure of the lamp and hence is objected.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0052608 to Morimoto et al., and further in view of U.S. Patent 6,777,875 to Steinman et al.

Regarding claim 1 Morimoto discloses (Figs. 1, 3 para [0018]-[0020], [0032],[0033]) a high pressure gas discharge lamp having at least one gastight fused press seal 12 between a glass like material and molybdenum 14, wherein molybdenum in the fused press seal is exposed to oxidizing environment and at least a part of the molybdenum that is exposed to oxidizing environment is covered with a coating 20 at least one type of metal oxide selected from titanium dioxide, tantalum oxide, zirconium dioxide, hafnium dioxide, silicon dioxide. Morimoto discloses the coating layer is formed of two layers one directly applied to the molybdenum and the other layer following the base layer. Morimoto discloses the layer following the base layer is made up of oxides.

Morimoto is silent about the coating formed of at least one of nitride selected from TiN, ZrN, HfN, AlN and or a carbide selected from TiC, ZrC, HfC and the carbide and/or nitride forms the layer of the coating that is applied directly to molybdenum.

Steinman in same field of endeavor discloses (column 1 lines 46-67) the coating on the molybdenum can be chosen from titanium nitride or chromium carbide.

Steinman further teaches these nitrides and carbides are suitable because they do not lead to increased brittleness of molybdenum end portion and they are thermally stable at very high temperatures.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use nitrides or carbides for the base layer of Morimoto for carbides for reducing brittleness of molybdenum end portion and thermal stability at very high temperatures.

Regarding claim 2 Morimoto discloses ([0036]) the thickness of the coating layer is 50nm to 3000nm.

Regarding claims 8 and 9 Steinman discloses (column 3 lines 1-3) the lamp is used for projection purposes.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0052608 to Morimoto et al., U.S. Patent 6,777,875 to Steinman et al. and further in view of JP 2002260581 to Kamimura et al.

Regarding claim 5 Morimoto discloses the following layer comprising SiO₂ but does not disclose the following layer composed of Al₂O₃.

Kamimura in same field of endeavor discloses (para [0107]) the coating layer formed of SiO₂, Al₂O₃ preventing oxidation and hence these are art recognized equivalents.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Al_2O_3 instead of SiO_2 as disclosed by Kamimura because the two materials are art recognized equivalents.

Regarding claim 6 Steinman discloses the base layer comprising titanium nitride but does not disclose this layer composed of AlN .

Kamimura in same field of endeavor discloses (para [0103]) the coating layer formed of TiN , AlN and hence these are art recognized equivalents.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use AlN instead of TiN as disclosed by Kamimura because the two materials are art recognized equivalents.

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0052608 to Morimoto et al., U.S. Patent 6,777,875 to Steinman et al.

Regarding claims 7 and 10 Morimoto and Steinman do not explicitly disclose the reduction in size of the fused seal portion (the longitudinal extent of the part of the molybdenum that is not exposed to oxidation) can be obtained as a function of a material of which coating is composed.

JP 2001102008 discloses (Figs. 2,5 English translation para [0031]-[0040]) a high pressure gas discharge lamp having at least one gastight fused press seal between a glass like material 4 and molybdenum 1, wherein molybdenum in the fused press seal is exposed to oxidizing environment and at least a part of the molybdenum

that is exposed to oxidizing environment is covered with a coating comprising silicon oxide SiO_2 . JP 2001102008 further discloses (para [0042]) this fused press seal (closure section) 4 having improved thermal resistance, the length of the fused seap portion (the longitudinal extent of the part of the molybdenum that is not exposed to oxidation) can be reduced thus resulting in small efficient envelope of the lamp.

The Examiner notes here that the limitation" reduction in size of the fused seal portion (claim 7) /the longitudinal extent of the part of the molybdenum that is not exposed to oxidation (claim 10) can be obtained as a function of a material of which coating is composed" is intended use limitation or intended manner. A recitation of the intended use or intended manner of claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use then it meets the claim *In re Otto*, 136 USPQ 458,459 (CCPA 1963).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

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Sikha Roy

Sikha Roy
Primary Examiner
Art Unit 2879